

Defeating Hemipteran pest defenders



Control of defending ants is crucial in managing Hemipteran insects in citrus orchards. By Rob Elfick

SA is the second largest exporter of citrus in the world. To maintain its position, three important aspects of citrus production must be prioritised: market access, fruit quality, and competitive pricing.

Citrus orchards are often hindered by the presence of Hemipteran pests like woolly whitefly, mealybugs, and other scale insects. Hemipterans have sucking mouthparts, which they use to feed on plant sap. This feeding activity can weaken the citrus trees,

reduce their vigour and stunt their growth. Many Hemipterans excrete honeydew, a sticky, sugary substance, as they feed. Honeydew can accumulate on leaves, fruits, and branches, creating a sticky surface that promotes the growth of sooty mould. Sooty mould can reduce photosynthesis by shading the leaves and can also render fruit unattractive. This can impact both market access and fruit quality.

Due to residue management and resistance concerns, the best means of managing honeydew producing Hemipteran pests is through biological control. However, using biocontrol against these insects can be challenging because of their mutualistic relationship with ants. Various

ant species are known to feed on the honeydew produced by scale insects and other Hemipteran pests. In return for this sustenance, the ants actively look after the pests by aggressively protecting them from their natural enemies, including augmented biological control agents. Ant species that are particularly problematic for Hemipteran pest management in SA include the brown house ant and the pugnacious ant.

SAGA™ (L10877) is a registered attract-and-kill paste developed for citrus growers to control both brown house and pugnacious ants. SAGA™ is an IPM-friendly solution that targets problematic ants in citrus trees, without harming the beneficial predatory ants that feed on other pests within the orchard. By providing effective management of aggressive honeydew feeding ants, SAGA™ helps farmers gain better biocontrol of the Hemipteran pests in a more cost-effective manner.

Hemipterans produce honeydew, which can eventually contribute to photosynthesis reduction, compromised fruit appeal, and hampered market access.

Effectively managing problematic ants in citrus orchards is crucial for sustaining the vitality of the citrus industry. With SAGA™, citrus growers gain a powerful tool to effectively control both pugnacious and brown house ants, disrupting their symbiotic relationship with honeydew-producing insects. By breaking this cycle, SAGA™ enhances the efficacy of natural enemies and bio-control agents, reducing the need for corrective spray applications and ultimately contributing to improved fruit quality, market access, and the overall health of citrus trees. Embracing local innovative solutions like SAGA™ ensures the continued success and competitiveness of citrus exports from SA into the global market.

Benefits Efficacy

Controls ants and breaks the food-for-protection mutualistic relationship between ants and Hemipterans, providing a better chance for natural enemies and bio-control agents to control pests.

Non-systemic

The product is applied on the trunk of the tree and does not make contact with the fruit. The active ingredient is not systemic and will not be taken up into the plant/stem/fruit/bark/leaf tissue. Therefore, residues are not a concern.

Registration

This is the only product registered for the control of both pugnacious and brown house ants on citrus.

Specificity

It's important to remember that not all ant species are problematic. Many species are beneficial due to predatory behaviours. Through the site-specific application of SAGA™, only pest ants are targeted and controlled, leaving beneficial ant species that forage on the orchard floor, undisturbed

Hemipteran pests' mutualistic relationship with ants facilitates their protection against biocontrol.



SAGA™ application

in an integrated resistance management programme. Other products can only be used once in a season.

When to apply SAGA™

Apply SAGA™ when ants become active in spring or if their numbers increase during any other time of the season. Scouting for early ant activity in citrus trees can help to ensure application is well timed, preventing pest pressure from building up.

How it works

Ants are attracted to feed on SAGA™ and once ingested, they become lethargic within 24 hours and die after three to four days. Delayed toxicity allows them to return to the colony, infecting other members with SAGA™ residue, ultimately wiping out the colony. ▶

- **SAGA™ - Reg. No. L10877 Act No. 36 of 1947**
- **Not classified as hazardous under GHS**
- **Active Ingredient: Hydramethylnon 9 g/kg | READ THE LABEL BEFORE USE | Use only as directed**
- **Registration Holder: River Bioscience (Pty) Ltd.**
- **admin@riverbio.com | +27 41 373 1409**
- **5th Floor, Fairview House, Fairview Office Building, 66 Ring Road Greenacres, PE, 6045**
- **Visit: www.riverbioscience.co.za**

and able to continue helping manage pests with soil dwelling life stages – like FCM (false codling moth).

Affordability

SAGA™ is reasonably priced and requires less frequent applications than similar products. It provides ant control for up to three months, saving you additional costs.

Reduced risk of resistance development

SAGA™ can be applied twice over a production season but can also be used